

Claims

1. A centrifugal fan impeller (1) having an axis of rotation (6) and comprising one or more modules (2), each module (2) comprising a mounting disc (4), at least one connecting ring (5) and a plurality of blades (3) extending between the mounting disc (4) and the connecting ring (5), the blades (3) being connected to the disc (4) and ring (5) at an angle ( $\alpha$ ) relative to the axis (6) of the impeller (1), the impeller being characterised in that the angle ( $\alpha$ ) at which the blades (3) are inclined may range from 5 to 30 (sexagesimal) degrees.  
10
2. The impeller according to claim 1, characterised in that the angle ( $\alpha$ ) at which the blades (3) are inclined is 10 (sexagesimal) degrees.  
15
3. The impeller according to claim 1 or 2, characterised in that each blade (3) is substantially trapezoidal in shape when seen in a straightened plan view.  
20
4. The impeller according to claim 1 or 2, characterised in that each blade (3) is substantially rectangular in shape when seen in a straightened plan view.  
25
5. The impeller according to claim 3, characterised in that each blade (3) has a straight leading edge (A) inclined at an angle ( $\beta$ ) ranging from 0 to 40 (sexagesimal) degrees with respect to the axis (6) of the impeller (1).  
30
6. The impeller according to claim 3, characterised in that each blade (3) has a straight trailing edge (U) parallel to the axis (6) of the impeller (1).  
35
7. The impeller according to claim 3, characterised in that each blade (3) has a straight leading edge (A) inclined at an angle ( $\beta$ )

of 12.65 (sexagesimal) degrees with respect to the axis (6) of the impeller (1).

8. The impeller according to any of the foregoing claims,  
5 characterised in that the profile of each blade (3) at the root is inclined at an angle ( $\gamma_1$ ) ranging from 50 to 80 (sexagesimal) degrees.

9. The impeller according to any of the foregoing claims,  
10 characterised in that the profile of each blade (3) at the end is inclined at an angle ( $\gamma_2$ ) ranging from 33 to 63 (sexagesimal) degrees.

10. The impeller according to any of the foregoing claims,  
15 characterised in that the profile of each blade (3) at the root is inclined at an angle ( $\gamma_1$ ) of 65.2 (sexagesimal) degrees.

11. The impeller according to any of the foregoing claims,  
20 characterised in that the profile of each blade (3) at the end is inclined at an angle ( $\gamma_2$ ) of 48.2 (sexagesimal) degrees.